



Idaho Office of Science & Technology

February 2007

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## Solar Power Component Firm to Build Plant in Idaho

(Pocatello) Hoku Materials, a division of Hoku Scientific Inc., plans to build a \$220 million polysilicon production plant in Pocatello with a payroll of 200 when the plant begins operating.

The city of Pocatello is providing 450 acres at the city airport for Hoku's facilities and future expansion. Subject to financing and other conditions, engineering and construction will begin this year and Hoku expects the plant to be operational in late 2008.

The Hawaii-based company focuses on clean energy technology and plans to produce a highly pure form of silicon, the key material used in most solar power systems.

Idaho Commerce & Labor, Bannock Development, the city and Idaho State University have been working together to attract high technology companies like Hoku Materials to southeastern Idaho. The state has offered \$1.2 million in work force training funds to the company and \$200,000 to the city of Pocatello to offset public facility costs created by Hoku's plans.

Hoku Scientific develops and manufactures fuel cell membranes and membrane electrode assemblies for residential and back-up power applications among others and automotive proton exchange membrane fuel cells. The company plans to expand into solar module manufacture. More information is at

## 2007 Events Calendar

**February 2-3**

**Discover Engineering Days**

**Boise**

Treasure Valley families can make a memory "wafer," operate a lunar rover robot, experience a wind tunnel, construct an "edible aquifer" out of layers of sweets and participate in a variety of other hands-on engineering and science activities at Discover Engineering Days at Boise State University.

For a complete schedule of activities, including maps, and to pre-register for some of the activities, go to [jasonidaho.boisestate.edu](http://jasonidaho.boisestate.edu).

**February 8**

**"Accelerated Networking Luncheon**

**Boise**

The eWomenNetwork presents speaker Doris

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## North Wind Gains National Recognition

(Idaho Falls) DiversityBusiness.com, the nation's leading multicultural Internet site, has named North Wind Inc. the top woman-owned business in the state of Idaho and 54th in the United States.

Along with that award, the company was also recognized as the top diversity owned business in Idaho, ranking 116th nationally; the top small business in Idaho, ranking ninth nationally among 8(a) businesses and 89th among all small businesses and 16th among all Hispanic-owned businesses in the nation.

"Woman-owned businesses and consumers are a growing force in the U.S. economy and a force to be reckoned with," said Kenton Clarke, chief executive of Computer Consulting Associates International, the company that built DiversityBusiness.com.

The list represents the top woman-owned businesses in both the U.S and Idaho in sectors such as technology, manufacturing, food service and professional services. Large organizational buyers throughout the country that do business with women-owned businesses use the list that is produced annually by DiversityBusiness.com.

For a complete list of winning companies, visit: [www.diversitybusiness.com](http://www.diversitybusiness.com).

North Wind offers services in environmental remediation, waste management, construction, decontamination and demolition and natural and cultural resource services. More information is at [www.northwind-inc.com](http://www.northwind-inc.com).

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## EnTempo Wins SBIR Grant

(Moscow) Moscow technology startup firm Entempo Corp. has won a \$100,000 NASA Phase 1 Small Business Innovation Research grant.

The grant is for technology to enable simple, inexpensive computer chips to perform complex mathematical computations that normally require larger, more expensive, power-hungry processors. The target market is embedded computers used in control and communications applications including avionics, spacecraft and portable devices like cell phones. EnTempo is setting up operations in the University of Idaho Business Technology Incubator.

More information is at [www.entempocorp.com](http://www.entempocorp.com).

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## American Semiconductor Awarded Key Patent

(Boise) American Semiconductor Inc. has been awarded its fifth U.S. patent for a double-gated transistor circuit related to the firm's advanced SOI CMOS technology.

The milestone adds to American Semiconductor's achievements in the area of advanced SOI CMOS wafer fabrication process design, development and manufacturing.

The patent inventors are President Doug Hackler of Boise and

Helge, author of "Joy on the Job" who will share secrets of happiness at work. Register or more information at (208) 629-4932

### February 8

#### Kickstand

##### Boise

Entrepreneurs, innovators, investors, movers and shakers are invited to attend Kickstand's regular monthly networking event 5:30-7 p.m. Event is free for members; \$5 for non-members and is at The Wine Cellar below Le Cafe de Paris. Speakers include representatives from three of Idaho's fastest growing start-ups.

RSVP: [www.kickstand.org](http://www.kickstand.org)

### February 22

#### Engineering Week Banquet

##### Boise

The Boise Chapter of IEEE will feature Dr. Terry Gilton, director of product technology for Micron Technology's Imaging Business Unit, at its annual banquet. Gilton will talk on "the future of image sensors." Event takes place at 6 p.m. and RSVPs are requested by Feb. 15. More information is at [ieee.arrowrock.com/boi\\_banquet\\_2007.asp](http://ieee.arrowrock.com/boi_banquet_2007.asp) or email [dkiri@micron.com](mailto:dkiri@micron.com)

### February 25

#### Mythbusters Event

##### Boise

Free presentation with Jamie Hyneman and Adam Savage, the hosts of the Discovery Channel's "MythBusters" weekly television series, at 2 p.m. Feb. 25, in the Taco Bell Arena at Boise State University. Although the event is free, attendees must have a ticket to attend; information on where to obtain the complimentary tickets is at [tacobellarena.com/mythbusters/gettix.htm](http://tacobellarena.com/mythbusters/gettix.htm)

### February 26

#### Bioidaho Legislative Luncheon

##### Boise

Luncheon will feature two prominent speakers and technology experts who will discuss the state's critical role in guiding and enabling the development of its bioscience and technology sector. Speakers are Joseph E. Robertson, Jr., President of the Oregon Health & Science University; and

Stephen Park of Nampa. The technology is the most fundamental building block of the Flexfet™ Independent Double Gated SOI CMOS technology that enables superior solutions for low-power, radio frequency and analog/mixed signal integrated circuits.

This independent double-gated planar transistor allows previously unavailable capabilities such as ultra low-power circuits using dynamic threshold control and dynamic reconfigurability to maximize power and speed at the same time, permitting deep sleep and turbo modes.

American Semiconductor Inc. is a pure-play foundry for wafer fabrication and advanced process development. American Semiconductor is also active in advanced technology research supported by agencies such as the U.S. Department of Defense, U.S. Department of Energy and NASA.

Adm. Archie Clemens (Ret), member of the Idaho Science & Technology Advisory Council. Event is 11:45 a.m.-1:20 p.m. at the Crystal Ballroom, Hoff Building. More information is at [bioidaho.org](http://bioidaho.org).

For more calendar information, visit **Conferences and Events** at [cl.idaho.gov](http://cl.idaho.gov)

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## ISU Receives \$2 Million Grant for Energy Center

(Pocatello) Idaho State University's College of Technology will receive \$2 million to develop an Energy Systems Technology and Education Center on campus.

The grant comes from the U.S. Department of Labor as part of the president's Community Based Job Training Grant program. The university is collaborating with the Idaho National Laboratory and Partners for Prosperity.

The center address the growing national shortage of energy-systems technicians. The new program will support the need both regionally and nationally by providing Associate of Applied Science degrees in energy systems electrical, mechanical, and instrumentation and control disciplines that are accredited by the Accreditation Board for Energy and Technology. It also will allow Idaho State, the INL and industry partners to collaborate on applied industrial research on next-generation electrical components and systems.

The goal is to advance science education, provide capable staff to maintain the nation's electrical infrastructure and improve the technologies needed to support a modern national electrical distribution system.

The Energy Systems Technology and Education Center should open in August. For more information, contact Scott Rasmussen, project manager, at (208) 282-3400; Richard Holman with the INL at (208) 520-0698, or Jessica Sotelo with Partners for Prosperity at (208) 681-0318.

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## Canyon County Contracts With MobileDataforce for Automation

(Boise) MobileDataforce has been selected by Canyon County in Idaho to provide a Mobile Automated Building Inspection system.

The system will help control costs related to inspections by improving the efficiency of the county's building and administrative staffs by automating the paper-based system for conducting and reporting inspections and making it mobile. The new system will be integrated with the permitting and inspection request system used today.

The Mobile Automated Building Inspection system, using

MobileDataforce's PointSync Mobility Platform, will dispatch to the inspectors' mobile devices a list of inspections to be conducted each day. While still on the construction site, inspectors will be able to file their reports and synchronize with the central office database.

Expected cost savings will come from reduced fuel consumption, reduced mobile phone usage, minimized overtime pay and reduced administrative work. Additional benefits will come from improved contractor communications, more accurate and timely reports and near real time information. More information is at [www.mobiledataforce.com](http://www.mobiledataforce.com).

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## **BSU Receives \$12.5 Million from Micron Foundation**

(Boise) The Micron Technology Foundation has pledged \$12.5 million to a new state-of-the-art building for the College of Business and Economics at Boise State University. The building will be a gateway to the university from the West. The total cost is estimated at \$31 million.

"Boise State University has been a great partner in education, helping Micron and others achieve success through the success of its faculty and students," said Steve Appleton, Micron chairman and chief executive.

Construction could begin as early as spring 2008. The Micron gift includes \$5 million in matching funds for additional donations to the project.

In addition to modern instructional facilities, the building will include a high-tech financial trading center, where students are exposed to the latest practices in money management; a center for student services; a center for economic development; and a center for innovation. Prominent public spaces where students, faculty, business leaders and government officials can interact are also planned.

Student enrollment in Boise State business programs is nearly 3,000.

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## **Deadline Nears for HP Technology for Teaching Grant**

(National) The deadline is Feb. 15 to apply for a Hewlett-Packard Technology for Teaching Grant, available in the United States and Puerto Rico.

Hewlett-Packard will award grants totaling \$10 million in cash and equipment to public schools, two-year colleges and and four-year colleges and universities in 2007. This grant initiative supports educators, who use mobile technology in innovative ways.

Based on the outcomes of the projects funded through this initiative, Hewlett-Packard may offer grant recipients the opportunity to receive higher-value grants in 2008. There is a specific emphasis placed on projects that propose to improve undergraduate courses related to environmental engineering and green product design.

Successful projects will be awarded a system of 20 HP Tablet computers to use in the classroom and \$19,000 to the principal investigator to support course development.

Web-based applications are due by 5 p.m., PST, Feb. 15. More information, and the request for proposals for applicants are available at <http://www.hp.com/go/hpteach>.

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## **Biogeochemist Named to Leadership at Energy Research Center**

(Moscow) Biogeochemist Robert Smith, interim dean of the University of Idaho's Center for Higher Education in Idaho Falls, has been selected as the center's associate vice president. Smith also will serve as associate director for research at the Center for Advanced Energy Studies.

The Center for Advanced Energy Studies is a partnership between the University of Idaho, the Idaho National Laboratory, Boise State University and Idaho State University. The collaboration addresses critical science, engineering, education and public policy issues associated with providing an appropriate mix of technologies needed to address future U.S. and global energy needs.

Since 2001, Smith has been a distinguished professor of subsurface science for the University of Idaho's biological and agricultural engineering department in Idaho Falls and serves as the associate director for the Big Sky Carbon Sequestration Partnership. Smith has published 35 reviewed papers, organized and served as editor of the "Scientific Basis for Nuclear Waste Management XXIII" symposium and given more than 80 presentations at scientific meetings. His current research, funded by the U.S. Department of Energy, is focused on how centrifuge techniques can be applied to investigating biogeochemical processes under certain conditions, the remediation of subsurface fission contamination through microbes and the geologic sequestration of carbon dioxide in deep aquifers of rock rich in magnesium and iron.

Prior to joining the University of Idaho, Smith held several positions with the Idaho National Laboratory in the geosciences and biotechnology departments.

More on the center is at [www.caesenergy.org](http://www.caesenergy.org).

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## **UI College of Engineering Celebrates 100 Years**

(Moscow) The University of Idaho has launched a year of celebration to commemorate its College of Engineering's centennial.

For the past 100 years, the university's College of Engineering has produced numerous innovations that impact society today - not just in Idaho but around the world and into space.

The combine leveler, developed by engineering alumnus Ray Hanson, helps regional farmers fully utilize their crop area on the rolling hills of the Palouse and around the world. The university's biodiesel program, one of the first in the nation, is providing environmentally friendly biofuels - research that impacts the automobile industry worldwide.

Alumnus Jack Lemley designed and oversaw construction of the 31-mile Chunnel - the longest undersea tunnel in the world - that connects England to Europe. And NASA research in space will expand to new frontiers because of new technology from the university that provides low-power energy sources for

spacecraft electronics. For more information about the College of Engineering and its current research, visit [www.engr.uidaho.edu](http://www.engr.uidaho.edu).

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## ISU Researcher Receives NSF Award

(Pocatello) Dr. Marjorie Matocq, a research professor at Idaho State University, has received a \$510,000 award from the National Science Foundation to study the roles of ecology, behavior and morphology in maintaining species boundaries. Matocq will also incorporate aspects of the research into a high school outreach program.

The study will specifically look at how various factors enable hybridization but prevent widespread gene flow between two species of woodrat.

The program will train local high school biology teachers in molecular genetic techniques and collaborate with them to present these techniques to their students and integrate these activities into the curriculum.

The outreach program will be a model partnership between high schools and universities, cost-efficiently exposing students to modern molecular genetics and evolutionary research.

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## Research to Study Deer, Elk Interactions

(Idaho Falls) Idaho State University and the Idaho Department of Fish and Game are joining forces at the Tex Creek Wildlife Management Area near Idaho Falls to better understand how deer and elk populations affect one another.

Mule deer and elk populations in Tex Creek are mirroring what is happening to the populations of these species on a larger scale in many areas of the Rocky Mountain Region. Mule deer numbers are declining dramatically while elk numbers are increasing.

While plenty of studies have documented that mule deer tend to avoid high densities of elk, the new study is unique in attempting to answer the "so what" questions such as whether avoidance by the mule deer affects their overall productivity or survival. The answers will help biologists understand how to better manage big-game herds.

Idaho State researchers and Fish and Game biologists and technicians are rounding up mule deer and elk to put radio collars on 20 female mule deer and 18 female elk. The animals will be herded by helicopter and driven into nets, where they will be sedated and collared. The radio-collars will provide data on the animals' behaviors for the next two years.

Over the last 15 to 20 years, mule deer wintering in Tex Creek have fallen about 50 percent to 1,500 while elk numbers have about doubled to around 5,000, according to researchers.

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## Telemetric Contracts With Pennsylvania Utility

(Boise) PPL Electric Utilities in Pennsylvania has deployed Telemetric Corp.'s system for monitoring and control of distribution reclosers.

The technology allows utility operations personnel to receive



near real time status information from mid-point and tie-point reclosers installed on distribution feeders. In addition, Telemetric integrated its technology into PPL Electric Utilities' operations center.

The utility had sought a two-way communications solution that would be reliable, cost-effective and work throughout its service territory.

The Telemetric Remote Telemetry Module is an intelligent wireless communication solution for remote monitoring and control of electronic controls.

Telemetric equipment is installed at more than 200 utilities nationwide.

More information is at [www.telemetric.net](http://www.telemetric.net).

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### **Bioinformatics Conference Coming to Idaho In '08**

(Sun Valley) The Institute of Electrical and Electronics Engineers' Computational Intelligence Society has given final approval to hold the 2008 Symposium on Computational Intelligence in Bioinformatics and Computational Biology in Sun Valley Sept. 15-17.

Started in 2004 in San Diego with 39 papers presented, the symposium has grown to over 130 submitted and 72 accepted papers for the April 2007 conference in Honolulu. The conference was held in San Diego in 2005 and Toronto in 2006. Special sessions were added with the 2007 conference to include Fuzzy Systems in Bioinformatics and Computational Intelligence in Biomedical Engineering. Offerings of special sessions are expected to expand for the 2008 conference.

A call for papers will appear in 2007 with an expected submission deadline in the first few months of 2008. All papers are peer reviewed by at least two reviewers and published as part of the institute's conference proceedings.

A reduced registration rate of \$125 will be available to students for early registration. Information on the 2007 conference is available at [www.cibcb.org](http://www.cibcb.org) and the same Web address will be used for the 2008 conference starting in the middle of 2007.

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### **UI Grad Named NIATT Student of the Year**

(Moscow) Recent University of Idaho College of Engineering graduate Matthew Benke has been selected as the National Institute for Advanced Transportation Technology's Student of the Year. He was chosen for his excellence in research, academic performance, professionalism and leadership. Benke earned bachelor's degrees in mathematics and computer science, a 2003 honors program certificate and a master's degree in computer science in 2005 from the University of Idaho. He continued his research with the national institute into 2006.

Benke's two years of graduate education were funded in part by the National Science Foundation Scholarship for Service, a program that supports students in computer security. Upon graduation, scholarship recipients go to work for the federal government for the number of years commensurate with the length of their scholarship funding.

Benke's master's project involved research on secure intelligent transportation systems. He created a mechanism for measuring the security of those systems and the survivability of a system

failure.

An intelligent transportation system is a computerized system of traffic signals and other automated traffic guidance. Benke's research allows planners to secure the system from hackers who might, for example, change traffic controls on busy one-way lanes into and out of large cities, or lift bridges when traffic is on them.

Benke now serves with the Department of Defense in Maryland, conducting vulnerability analyses for embedded operating systems.

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### **Ideas Innovations Idaho License Plates For Sale**

(Statewide) Specialty license plates that support Idaho's science and technology industry are for sale through the Idaho Transportation Department.

A portion of the proceeds from each plate sold goes to a fund that is used to develop programs and market the state's technology sector.

A picture of the license plate, and information on how to purchase one, can be viewed at [technology.idaho.gov/license](http://technology.idaho.gov/license).

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### **Have an Idea/Submission for this Newsletter?**

Contact Julie Howard at the Idaho Commerce & Labor's Office of Science & Technology at (208) 334-2650, ext. 2147, or at [Julie.howard@cl.idaho.gov](mailto:Julie.howard@cl.idaho.gov)

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### **Read More Idaho Technology News**

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***"We Create Jobs, Strengthen Communities and Market Idaho."***

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